LOUISIANA Conservationist

LOUISIANA WILD LIFE AND FISHERIES COMMISSION

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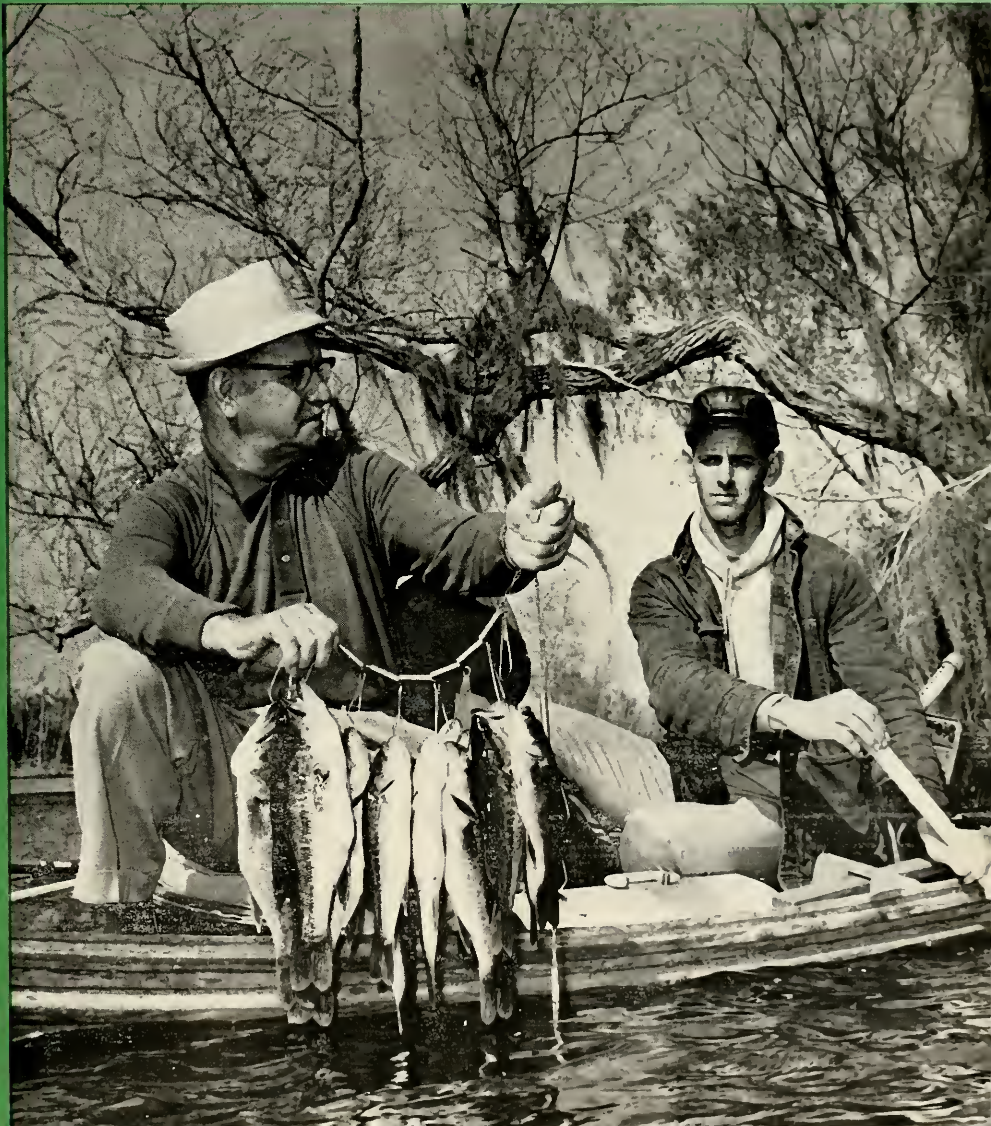

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May-June

Conservation Pledge

I give my pledge as an American to save and faithfully to defend from waste the natural resources of my country—its soil and minerals, its forests, waters and wildlife

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A typical Louisiana scene in May and June is that of bass fishermen holding highly-prized strings of fish. These are two of the most attractive freshwater fishing months although freshwater fishing is good all year around. Budding, moss-draped trees in the background show that winter has lost its punch and that the balmy, pleasant days are at hand. Bass are taken all over Louisiana and can properly be considered the most appealing freshwater game fish for sportsmen.
(Photo By Paul Kalman)

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LOUISIANA WILD LIFE AND FISHERIES COMMISSION

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Governor

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EDITORIAL

IT WOULD BE wise at this time to call attention of sportsmen in Louisiana to the fact that, countless bills are presently in Congressional Committees which would restrict the sale and use of firearms.

As we center our interest on late spring, summer and early fall fishing; we should also remain on guard against these anti-firearms bills. There are so many introduced, and being introduced, at both state and national levels; there is a growing possibility that some of these bills may actually be passed if sportsmen have their attention focused entirely on fishing, boating and other outdoor recreational pursuits.

It is appropriate to mention that the Louisiana Wild Life and Fisheries Commission passed a resolution vigorously opposing the stringent anti-firearms bills being considered in Congress. The resolution was adopted at the regular January 28 meeting of the Commission and copies were sent immediately to every member of the Louisiana Congressional delegation.

The resolution was prompted by a virtual flood of telephone, telegram, and written protests over the mushrooming number of bills. The Commission took the stand that the intent of those restrictive bills is in direct contradiction to those provisions of the Bill of Rights contained in the Second Amendment of the Constitution which guarantee the traditional right of Americans to keep and bear arms.

The Commission also contends that those bills, if passed, would create a serious problem for approximately 300,000 hunters in Louisiana to acquire, possess, and use firearms that they must have to pursue the great traditional American sport of hunting, a form of recreation which the Commission constantly endeavors to promote.

The Commission further contends that the anti-firearms bills under consideration would also deprive the citizenry of Louisiana and the United States of the Constitutionally provided right to protect life and property through the use of firearms.

Also, the bills in Congress contain in many cases certain provisions that would leave the decision of who could purchase firearms, and who could not, to local officials or appointees.

Further, the Commission pointed out in its resolution, the bills pending in Congressional Committees would call for added license fees and paper work, making sporting arms more expensive and much more difficult to obtain.

L. D. YOUNG, JR.
Director

In summary, the Commission resolution said that present firearms bills could be the basis for widespread gun registration, which has proved a dismal failure in other countries, greatly undermining the national security of those countries.

To cite examples of how the rash of anti-firearms bills sprang up in Congress and in some state legislatures, there are at this writing approximately 30 bills in the Congress of the United States. At the end of January, there were 35 similar bills already introduced in the Massachusetts Legislature alone.

Some bills being considered would make the age limit for possessing and using a firearm for sporting purposes just one year under the present draft age. I might mention that the Armed Forces are at the present time attempting to lower the minimum draft age by a year. It is evident that those particular age-limit bills would prevent the young men of America from use of firearms until they would be old enough to enter the Armed Forces. This, to my way of thinking would be the greatest blow to the rich outdoor heritage of America as we know it.

It is conservatively estimated that 90 per cent of the firearms privately owned in the United States are used wholly for sport. Also, when Congress enacted the Pittman-Robertson Act, which taxes sporting arms and ammunition for game restoration, it in effect classified firearms as sporting implements.

It is conservatively estimated that 90 per cent arms and sporting-goods industries to create a new picture of the firearm as a sporting implement and not as a criminal tool.

The Commission will continue to oppose unnecessary anti-firearms legislation as being Constitutionally unsound and unlawful. In this opposition we must not slumber. There are so many bills being considered, there is always possibility of a "sleeper" slipping through.

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Nelson Summerell, left, and the author, the Commission's "duck counters", discuss survey routes prior to making an inventory.

Counting DUCKS

Clark Hoffpauir

The Commission's inventory plane on a census flight. Louisiana's vast waterfowl habitat would be impossible to check properly without aircraft.

TWICE EACH MONTH throughout the past winter the children at the Johnson Bayou school noted a small plane which approached, dropped quickly to a low level, and disappeared across the marsh at that same treetop altitude. They took little note of the event, nor should they have. It has been occurring at these regular bi-monthly intervals, from fall until spring, for more than a decade.

"That's just those duck counters", might be the only comment warranted by the plane's passing.

Inside the plane an observer pushes the button of a microphone and talks into a recorder: "Transect one Southwest Louisiana. October 15, 1963. Temperature is 72 degrees, no wind, weather clear with visibility unlimited, and now counting . . . mallard 10 . . . pintail 6 . . . gadwall 20 . . . blue-wing 50 . . . ."

The "duck counting" for that particular waterfowl inventory of the Louisiana Wild Life and Fisheries Commission had begun.

One of the most valuable facts which a wildlife manager or administrator can have is knowledge about the population status of the species in question. Since the earliest stages of game management, therefore, efforts have been made to inventory wildlife.

The total population of a species, or even the population trend, can be relatively unimportant when dealing with certain game. In the case of deer, for instance, browse studies can tell the biologist whether or not the carrying capacity of that range has been reached or exceeded. He can then liberalize or restrict hunter harvest to bring the herd into balance with the habitat.

This is not true of waterfowl.

There are examples of overutilization of an area by waterfowl, but the mobility of ducks and geese precludes using the above method of determining population-habitat balance. An actual inventory of waterfowl pouplations and/or trends, therefore, is most desirable.

The first tallying of waterfowl was done by the old Bureau of Biological Survey, predecessor of the present U.S. Fish and Wildlife Service, in the early 1930's. It consisted simply of a card to key people in the United States. It was merely an opinion poll, since it asked: "Do you think there are more or fewer ducks this year than there were last year?"

Later the Bureau began making actual ground counts using its own personnel, and about 1938 some of the states began making their own estimates. It was 11 years later, however, the fall of 1949, when Louisiana began "counting ducks".

The department soon recognized the importance of this census to waterfowl hunters, and assigned it high priority. Continuous efforts were made to improve it and, despite being started later than were some in other parts of the nation, the Louisiana inventory now conducted by the Wild Life and Fisheries Commission is currently one of the most reliable in existence.

Counting waterfowl from the ground is not very satisfactory. Whether the tally is made from water's edge or from a boat the disadvantages are many, and they are obvious. Only the fringe of concentrations can be observed. Many ducks hide in vegetation where they can't be seen from ground level. Ducks and geese move away from observers on foot or afloat and may be counted more than once. Many waterfowl areas cannot be approached either by foot or by boat.

It is immediately apparent that ground checking of five million acres of marsh, two or three million acres of rice fields and pastures, and several hundred lakes and rivers is impossible without a completely impractical army of observers.

Until the availability of reliable airplanes, however, the ground count was the next best thing. It is still needed for certain phases of the breedings area survey, such as for brood counts and nesting counts, but it is rarely applicable to inventory of migrating or wintering waterfowl.

For reasons ranging from economics to indifference, some states and some organizations continue to use ground surveys. All Louisiana inventories are made from the air, and have been for more than a decade.

A "count" of millions of waterfowl, of course, is not the precise count of a rancher tallying his cattle. It is a highly educated estimate by experienced personnel using the best techniques.

For purposes of waterfowl inventory Louisiana is divided into five areas: Southwest, Southeast, Northeast, Northwest, and Central. For the first two areas a sampling technique of census is used, except that in the Southwest a total count is made when ducks become concentrated. For the other three a "total count" of waterfowl is made on all lakes, streams, and swamps known to have ducks or geese on them.

The sampling technique used in the Southwest and Southeast is called the transect method or strip count. In it the observers fly precise east-west or north-south lines which are spaced so that they are representative of the terrain. These strips are marked on a map and remain exactly the same from year to year.

The flight along each transect is made at an altitude of 75 feet, with the plane slowed to a speed of 90 to 100 miles an hour. The two observers—one is the pilot—count the waterfowl on their respective sides of the flight path, to a distance of 220 yards from the line. This gives a strip tally 440 yards in width, or 1/4 of a mile.

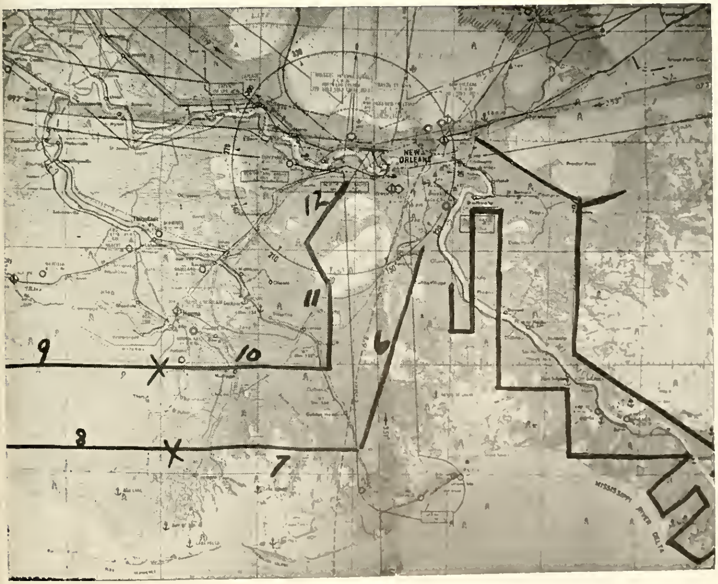
The use of an automatic recording device greatly facilitates the actual counting. In being able to talk the tremendous number of figures into a mike rather than having to jot them down on paper, the observers are able to devote full attention to the waterfowl.

The total figures for each transect are multiplied by an expansion factor which represents the percent of the total area it covers. This is done by species, with the results added to get an overall total.

There is one exception to the use of the transect method in the marsh-ricefield country, the Southwest and Southeast, and that is the case of refuges. On these a total count is made rather than a sampling.

The reason for this exception is that huge concentrations of ducks and geese are attracted to these sanctuaries. To expand a transect through these concentrations as representative of the entire surrounding countryside would give an abnormally high, inaccurate total.

This same bias would also be true where a transect crosses a tremendous concentration of ducks, so the total count is used when this



Transects are laid out on a map and remain the same from year to year.

occurs. Again, this is for the purpose of avoiding an inaccurately high total.

The same type of total count used on refuges in south Louisiana is used on all waterfowl concentrations areas of the Central, Northwest, and Northeast areas. Duck and goose habitat in these three is relatively sparse and well delineated, which makes this approach to inventory practical.

The ability of a good observer to "eyeball" a flock of ducks and quickly arrive at a reasonably accurate figure is amazing, but it is easily explained by two factors: training and experience. Stability of personnel increases the reliability of waterfowl inventories, so the value of those made in Louisiana are increased by the fact that fewer than six men have been involved since the counts began 15 years ago.

Nelson Summerell and Clark Hoffpauir are the two Louisiana duck counters at this time. Nelson, who lives in Ferriday, serves as pilot. Clark, who lives on Rockefeller Refuge in Cameron parish, is the Commission's waterfowl biologist.

Although several types of aircraft have been used since aerial inventory began in Louisiana in 1951, the plane now used for most of the work is a single engine plane with retractable landing gear. The high wing characteristic of this craft gives good visibility, and the plane is fast enough to minimize time lost when "dead heading" between transects. The retractable landing gear affords a measure of safety in the event of an emergency landing in marsh or water.

For checking the huge concentrations of scaup which frequently gather far out in the Gulf in late winter, Commission inventory personnel usually turn from the single-engine aircraft to a twin-engine amphibious plane.

Louisiana's waterfowl habitat is vast, and any single duck and goose survey of it is a substantial task. Some 26 hours of actual flying time are required for the average statewide census. Considering the time lost on unproductive runs between transects this is about 3½ days of flying.

When each flight session is over the mass of information on the recordings must be transcribed. The expansion factor for each transect must be applied by species. The totals for each of the state's five sections are tabulated, and finally that for the entire state.

Weather is always a factor that must be considered in making these inventories, both for the sake of visibility and for safety. Hours of low-level flying involve an element of danger, and there have been forced landings during the census.

A single census of Louisiana, therefore, is a substantial undertaking. Magnify that by the problems involved in conducting two of these each month from early fall through late spring since 1951, however, and the accomplishment becomes infinitely greater.

The work isn't over when the plane lands. All of the data on the records must be transcribed—by species and by transects.

Some waterfowl areas of Louisiana are surveyed more frequently than twice a month. The Northeast and Northwest sections are usually checked each week, and Catahoula Lake—known to be the key hotspot for ducks north of the marshes—is frequently censused twice a week.

The Louisiana Wild Life and Fisheries Commission believes that the results are worth the effort!

From these years of effort the Commission has accumulated a wealth of information concerning the waterfowl which migrate into and through the state and which winter in Louisiana—species composition, distribution, arrival dates, major flight peaks, and data on population numbers and trends. It is probable that no other state has such a backlog of detailed information concerning its waterfowl.

Chief beneficiary of this work has been the hunter. The results of the inventories have been used by the Commission in fixing season dates for maximum advantage of most gunners, and they have been used liberally and forcefully in pressing for sound migratory bird hunting regulations.

The Commission plans to continue the waterfowl surveys, since the cost-benefit ratio is so obviously on the plus side. When you see the small plane buzz your favorite duck lake next fall, therefore, just say that the "duck counters" are back at it. ✠

In Memoriam

Death came on Thursday, February 20, 1964, to James N. McConnell, retired chief of the Oysters, Water Bottoms and Seafood Division of the Louisiana Wild Life and Fisheries Commission and a nationally recognized authority on oysters, water bottoms and seafood.

A native of New Orleans, the late James McConnell began his career upon graduation from high school, entering the engineering field where he worked in the construction of roads and various other projects.

Later he worked for the United Fruit Company doing similar work in Central America.

World War I interrupted his career and in 1917 he entered the Second Officers Training School at Leon Springs, Texas, receiving a commission as Second Lieutenant.

McConnell was assigned to the Coast Artillery Corps at Fort Winnfield Scott near San Francisco. He saw active duty overseas with a heavy artillery unit in France. While in France, he served in the famous Argonne sector as an Intelligence Officer.

Following the war, McConnell returned to Louisiana and became Assistant City Engineer at Monroe, remaining in that position until November, 1926, when he took a position with the Louisiana Conservation Department as Acting Director of the Division of Oysters and Water Bottoms.

Later, after having passed the State Board of Examination as a land surveyor in 1927, McConnell was appointed Director of the Division of Oysters and Water Bottoms.

McConnell continued in that position until his retirement September 30, 1962.

In 1957, the Commercial Seafoods Division was incorporated into the division which McConnell headed.

During the one-third of a century in which McConnell was active in conservation work and associated activites, he is best remembered for his untiring efforts toward development of the Louisiana oyster production.

His was a direct approach to this important natural resource and his efforts were noted for protection of the oyster bedding grounds from encroachment of industry and subsequent pollution which follows in its wake, and also toward protection of oysters from parasites and disease.

JAMES N. McCONNELL

Constant studies and surveys by trained biologists under his direction forestalled many of the problems which other oyster-producing areas have encountered. Their findings have been important in Louisiana becoming the Nation's leading producer of oysters and have been of great value to others engaged in the industry, here and abroad.

McConnell was a member of the Oyster Institute of North America, one of the organizers and a former chairman of the Gulf States Marine Fisheries Commission, a member of the National Shell Fisheries Association, and numerous other organizations interested in the advancement of the seafood and shell industries of the country.

Even after his retirement from the Louisiana Wild Life and Fisheries Commission, McConnell remained active and demonstrated great interest in the oyster and marine fisheries programs being carried out by the Commission.

Highly respected by his associates and those persons with whom he had contact, McConnell's passing was sudden and shocking to his family and many friends. ✠

50,000 Acres Purchased

Saline Wildlife Management Area

THE LOUISIANA WILD LIFE AND FISHERIES COMMISSION completed purchase of 50,000 acres of land in LaSalle and Catahoula parishes for permanent use as a wildlife management area, dedicated to increased development of game populations in central Louisiana and as an outlet for fishing, hunting and other outdoor recreational sports.

The tract consists of 48,679 acres in LaSalle parish and 1,340 acres in Catahoula parish.

The act of sale took place March 4 in Governor Jimmie H. Davis' office in Baton Rouge, with a committee of the Louisiana Wild Life and Fisheries Commission signing for the commission. The committee consisted of Chairman A. J. Buquet, Houma; Richard Fleming, vice-chairman, Shreveport; and Ray Whatley, Alexandria.

Governor Davis also signed the act of sale, in approval of the purchase by the state agency. The act was also attested by L. D. Young, Jr., commission director.

Money for the purchase, amounting to $29 an acre, came from the Russell Sage Foundation funds which are dedicated to the Louisiana Wild Life and Fisheries Commission for the purpose of wildlife conservation projects in the state.

Cost per acre for the tract was slightly less than the amount paid for the Russell Sage Wildlife Management Area near Monroe, now providing excellent outdoor recreational opportunity for the people of the state.

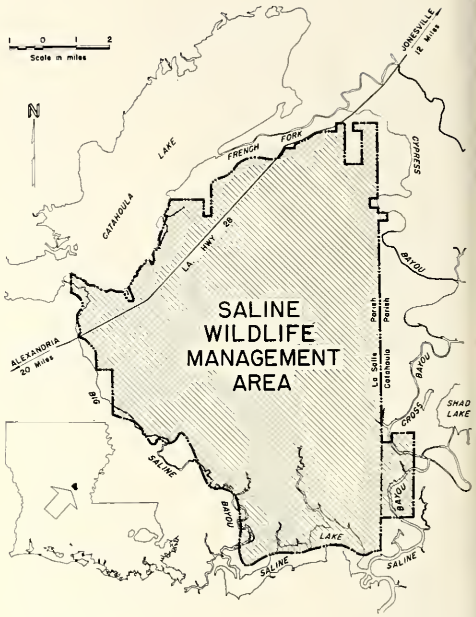
Authority to acquire the tract was authorized by unanimous action of the Louisiana Wild Life and Fisheries Commission at its regular monthly public meeting held in New Orleans February 25.

At that time, it was pointed out that the new wildlife management area would provide access for Louisiana to some of the finest freshwater sport fishing in the state.

It was announced at the February open meeting that the commission has also agreed to take an option on 10,256 acres adjoining the area purchased Thursday. This was to extend the combined tracts to the Larto lakeshore, providing increased public access to additional bodies of freshwater fishing in the state.

Action of the commission committee has been hailed as a great step forward in securing lands for wildlife purposes for the benefit of present and future generations of persons seeking outdoor recreation.

The commission cited national figures which show a population increase in the United States will double within 40 years. It was brought out at the commission meeting that shorter work weeks, better highways, higher wages and increase interest in outdoor recreation will result in tripling of outdoor activities.



Those national figures also reveal that the demand for available land is increasing at an accelerated pace. It is being acquired for industrial purposes, housing projects, power and pipeline rights-of-way and many other purposes which accompany an expanding population.

As the present trend continues, places for public fishing and hunting will decrease unless lands are secured and dedicated for this purpose with funds which can only be used for this purpose.

Other states have approved multi-million dollar bond issues to secure and develop land for recreational uses.

This area is occupied by a vast stand of hardwood bottom land timber comprised of overcup oak, bitter pecan, nuttall oak, red oak, and elm and has a potential for development of game populations to the extent that it will one day be one of Louisiana's finest forest game and waterfowl hunting areas. Excellent fishing is already available on the area and this acquisition guarantees access to this sport for public use in the future.

The property borders the shoreline of Catahoula Lake on the northwest and is bounded on the south and southwest by Saline Bayou and Saline Lake. On the east the boundary generally follows the line that separates LaSalle and Catahoula Parishes, although it overlaps into Catahoula Parish and includes considerable frontage on Saline Bayou.

This will provide the gateway for public access into the waters that extend from Larto Lake to Catahoula Lake for the purpose of hunting and fishing. At the rate that bottom land hardwoods are being cleared up in northeast Louisiana for agricultural purposes, this may well be one of the last remaining large hardwood forest areas left in a few years for public use. With Louisiana's last remaining backwater and overflow areas now being leveed and drained this is already becoming one of the last such areas in the state. This overflow condition creates an ideal environment for sport and commercial fishing and this is the reason that the waterways in this area now offer some of the best fishing in the south.

A channel is planned that will extend from Catahoula Lake to Black River, however, the backwater fishery in the Saline Bayou-Larto Lake complex will remain south of the channel and levee, thereby continuing the annual spring overflows that are essential to fishery production.

The channel and levee will be constructed by the U.S. Corps of Engineers in order that water levels can continue to be fluctuated on Catahoula Lake, thereby saving it for future use by large numbers of migratory waterfowl and as a public duck hunting area. A water control structure will be installed in the channel near the shoreline of Catahoula Lake and will be located on the Saline Game Management Area. It will be operated by the U.S. Fish and Wildlife Service. This is considered to be one of the most significant developments on behalf of wildlife in Louisiana in recent years.

Detailed management plans have not as yet been worked out since all surveys have not been completed, however, a full time manager has been employed to supervise the area. Also engineering surveys are being conducted through the cooperation of the Department of Public Works to fix and mark the boundaries. Plans are being made to install public boat launching ramps on Saline Bayou in order to increase access for sport and commercial fishermen.

Future plans include the introduction of east-

Above is typical squirrel, rabbit, deer and potential wild turkey terrain on the Saline Wildlife Management Area. The Commission has already formulated plans for increasing the number of deer and squirrels on the 50,000-acre tract acquired for public recreational uses. It is also planned to eventually stock wild turkey during the development stage of the wildlife management program. Roughly one half of the entire tract will be ideally suited to turkey use.

ern wild turkey in the northern half of the property that is to be protected from spring overflows through the installation of the Catahoula Lake diversion channel and levee. All studies so far indicate that this has an excellent potential in the development of a favorable turkey population that will provide many hours of outdoor recreation for hunters.

Already deer are present on the area and this population can be greatly increased. Added protection against poaching, protection of the northern part of the property from spring overflows, coupled with timber stand and range improvement practices should eventually result in the development of a deer herd of from 1,000 to 1,500 animals. The harvest of one-third of the herd annually or about 300 to 400 deer will be one of the primary benefits obtained from the Commission's management program.

Presently this area is utilized only by a few diving ducks on Saline Lake and a few wood ducks along the bayous. However, excellent opportunities for the development of a fine waterfowl shooting area are available.

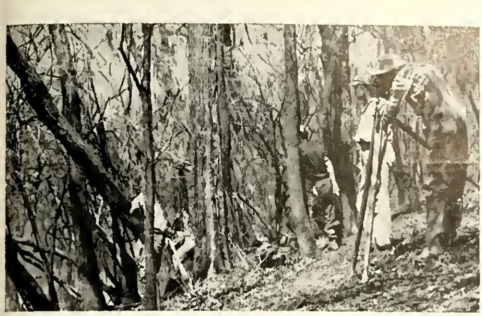
This property joins Catahoula Lake which normally winters 150,000 to 300,000 ducks. With the development of water management areas on the property large numbers of these ducks can be expected to fly back and forth from Catahoula Lake thereby providing excellent duck hunting.

Water management areas can eventually be constructed for this purpose, as funds become available, in the southern half of the property that will not be leveed. This will provide a boon to wintering waterfowl, wood ducks, and hunters as well. Such a development would partially compensate for the loss of other wetland areas around the state from drainage.

Timber stand improvement practices will be initiated and this will greatly benefit squirrel populations in the future. This important game species is heavily sought by Louisiana sportsmen and this area will eventually be one of Louisiana's most important squirrel hunting areas. Like most other small game species the size of the squirrel population is determined by the size and condition of the forest habitat. As the forest timber types are improved over a period of years by means of timber-stand management programs, it is expected that squirrel populations will increase. This should hold true over the entire area and will mean thousands of hours of outdoor recreation for Louisiana squirrel hunters. Fox squirrel are the predominant species, however,

Acquisition of the 50,000-acre Saline Wildlife Management Area located principally in LaSalle Parish with a small portion in Catahoula Parish formally took place in Governor Jimmie H. Davis' office March 4, 1964. Shown from left to right at the Act-of-Sale are: A. J. Buquet, Commission Chairman; H. B. Fairchild, Commission Member; R. E. Callicott, former owner of the tract; L. Richard Fleming, Vice-Chairman of the Commission; Ray Whatley, Commission Member; James L. Frey, Commission Member; John Barton, business associate of Callicott; and Richard K. Yancey, Assistant Director of the Louisiana Wild Life and Fisheries Commission. At center are Governor Davis and L. D. Young, Jr., Commission Director.

The Saline Wildlife Management Area offers vast acreage for squirrel hunting. This photograph shows a squirrel hunter during the last season. Under a timber stand improvement program planned by the Louisiana Wild Life and Fisheries Commission, it is anticipated that much larger populations of squirrels can be developed.



Immediately after acquisition of the tract, teams of surveyors from the State Department of Public Works moved into the new Saline Wildlife Management Area at the Commission's request and began locating. Here, one crew of surveyors is shown at work running a boundary line deep in the heart of the 50,000 acre tract.

The New Saline Wildlife Management Area borders on Catahoula Lake, a highly important waterfowl area. Water control areas will be constructed on the management area creating additional waterfowl public shooting grounds.

A commercial fisherman in the role of friend to the sport fisherman. The taking of rough fish, such as the gar, by commercial fishermen in the waters that surround the Saline tract, is recognized as good fish and lake management.

Typical commercial catch of fish from waters surrounding the Saline Wildlife Management Area. Although the nearby waters are widely known as some of the best sport fishing areas in the state, the take of commercial fish is also excellent. Commercial fishing removes rough fish to make more room for the freshwater game fish. Included in this typical catch are buffalo, carp, grinnel, gaspergou and gar. Work in planning boat launching ramps on the area is already in process and plans are on the drawing boards to provide facilities for sport fishermen throughout the area.

some grey squirrels will no doubt be available as timber-stand management progresses.

Swamp rabbits are present on the area and excellent potential exists for increasing their numbers. Rabbit populations are normally geared to food and cover conditions and ample opportunity exists for improving both of these. Interest is increasing each year in the state in rabbit hunting and this is another important benefit that Louisiana sportsmen will realize.

Because of the annual spring backwater overflow some of the finest sport fishing in the south is already available on the waterways that surround the property. Bass, bream and white perch fishing is excellent, particularly during the early summer as water levels begin to drop. Good sport fishing continues during the winter until water levels begin to rise again.

The waterways are heavily utilized now by commercial fishermen who take large quantities of buffalo, carp, catfish, garfish, bowfin, and gaspergou. The removal of these rough fish by the commercial fishermen allow more room for the game fish to thrive and this is another reason why this area is one of the best sport fishing spots in the state. Countless tons of commercial fish have been removed in the past thereby greatly benefiting the game fish populations and sport fishing as well. The economic value of commercial fishing is high.

A boat launching ramp is being planned that will provide access into the waterways that extend from Larto to Saline Lake. Such facilities are in great demand by Louisiana sportsmen and it is expected that this large launching area will be heavily used. ✠

More On The Atchafalaya

Max W. Summers

LOUISIANA CAN HARDLY afford to give up the many recreational benefits which the Lower Atchafalaya River Floodway now offers. All who are interested in hunting, fishing and other outdoor activities should be very concerned over the flood control project currently being planned for the lower spillway by the U.S. Army Corps of Engineers.

If this major flood control project is constructed according to the provisions presently contained in the project design report prepared by the District Engineer, New Orleans Area, recreational interests will face a situation that will have a damaging effect on the Atchafalaya fish and wildlife resources.

This project report should be modified to contain provisions that will minimize losses to fish and wildlife and provide for equal consideration of recreational interests before it is approved for use as the guide for flood control work in this river basin.

This flood control project report is now back in the New Orleans District where it originated. It is a pretty well traveled document having been to Vicksburg, Mississippi and Washington, D.C., where it was reviewed by the Division Engineer of the Lower Mississippi River Valley and the Chief of Engineers, U.S. Army Corps of Engineers.

The LOUISIANA CONSERVATIONIST *published articles about the Atchafalaya Basin in the July-August and November-December issues. This follow-up article by Max Summers, supervisor of river basin studies, brings the reader up to date on this very important fish and wildlife area.*

Latest information available indicates the project document has not been approved in total content. However, certain flood control measures have received tentative approval and will proceed accordingly. Work on the protection levees, along the outer edges of the basin will move forward and they will be improved with respect to grade and other necessary features that will restore the project intended flood control capacity.

The main channel of the Atchafalaya River will be enlarged to project dimensions of 100,000 square feet cross section and this main channel will be clearly defined as to alignment from Whiskey Bay Pilot Channel through the upper reaches of Grand Lake above Morgan City.

Other considerations and recommendations contained in the general project design report are being held in abeyance until such time that fish and wildlife interests and the Corps of Engineers can meet to further discuss a possible solution to differences of opinion regarding these project features.

The Louisiana Wild Life and Fisheries Commission strongly urges that the Atchafalaya River's east guide levee extension be abandoned in lieu of the main channel enlargement. We also favor the relocation of the proposed upper most closure from the confluence of the main stem of the Atchafalaya River and the Whiskey Bay Pilot Channel, to the lower most closures that have been studied.

Further work should be coordinated whereby spoil material that results from dredging and ex-

The natural beauty of the vast Atchafalaya River Basin is revealed here in this fishing scene.

cavation activity can be controlled and localized into spoil islands or intermittent spoil banks with designated locations.

Specific fish and wildlife features that are contained in this project report are formative but awaiting future decisions to be made jointly by the Corps of Engineers and the participating agencies involved in this project.

A fair and workable plan or plans should be reached in future meetings with the Corps of Engineers, the Bureau of Sport Fisheries and Wildlife and the Louisiana Wild Life and Fisheries Commission that will provide for both flood control and due consideration to fish, wildlife and recreational interests.

The Commission feels definite conditions must be provided so this floodway area can be improved for flood control, as well as, fish, wildlife and recreational purposes. It would be inconsistent with current federal policies to preclude any measures that would assure this provision. This approach is important because as our population expands, more and more recreational opportunity must be provided. The lower Atchafalaya Basin Area would provide 560,000 acres of ideally situated territory for the development of a vast public recreational facility.

The need for relaxation and outdoor enjoyment is a must for the well-being of Americans. If agencies fail to meet responsibilities now in providing for future recreational needs and outdoor interests, economic as well as personal needs will not be met.

In Louisiana this can be avoided if action is taken now to maintain the Atchafalaya River Basin as a natural wilderness for today and in the future. *

The Henderson-Opelousas Bayou Area now receives annual overflow and backwater which maintains the important sport and commercial fishery so valuable to the economy of this region.

Louisiana Wildlife Shorts

Probably no other area of the country is more beautifully blessed with almost limitless water, land, and marsh resources conducive to both industrial progress and outdoor recreation than is Louisiana.

Each area of Louisiana is distinguished by diversified terrain and accompanying opportunities for recreation based upon the nature of the terrain.

A good example of unsurpassed recreation is seen in the annual migration of ducks, geese and other waterfowl to Louisiana. Located at the tip of the Mississippi flyway, Louisiana can be likened to a target area for millions of feathered migrants. Pouring down the vast Mississippi flyway, the winter travelers are constricted into a tight pattern in Arkansas, choked to cylinder bore, and the load is scattered all over the state.

Figures assembled by the Louisiana Wild Life and Fisheries Commission, trustees of the vast resources, reveal that the state's commercial fisheries industry represents an estimated outlay in equipment of $85,000,000 and employs directly over 37,000 persons.

From the standpoint of the commercial fishermen and sportsmen, Louisiana's fish and game are in the topmost ranks of the state's natural resources. Louisiana shrimp are known throughout national and international marketing sources for both quality and size.

During the open season, sportsmen also harvest a generous share of shrimp which are used as bait in salt water fishing, and for home consumption. This is another example of how industry and recreation move hand in hand in sharing Louisiana's natural resources.

There are about sixty-five boats in Louisiana's comparatively new menhaden industry, one which produces oil and meal at an estimated present value of $20,000,000. Netting methods are scientifically geared to the present. Vessels used in the menhaden industry average approximately 100 feet in length. Airplanes are used to spot schools of menhaden and to direct operations for the fishing fleets of four large and growing menhaden firms already operating in Louisiana.

Louisiana waters yield thousands of tons of seafood of a large variety and superior quality. The salt water fishing industry alone is worth more than $5,000,000 annually, with the catch including speckled trout, redfish, sheepshead, croaker, red snapper, mackerel, flounder, mullet and drum—all sporting fish that are eagerly sought by sportsmen and their families who share in the huge annual commercial and recreational fish harvest of Louisiana waters.

WILDLIFE FEDERATION

1. New officers of the Louisiana Wildlife Federation elected during the group's 25th annual convention in Shreveport are shown from left to right: Herbert Ducote, Baton Rouge, first vice-president; Clyde Smith, New Orleans, second vice-president; Sam Frisby, Alexandria, president; Wyatt Jackson, Shreveport, secretary; and Ralph Kling, Gonzales, treasurer. Fisby succeeded Lloyd Voorhees, Monroe as president of the federation.
2. C. J. Brignac, left, representing the Marsh Duck Club of St. Charles Parish, is shown receiving the Walter Cranfield Memorial Trophy from Walt N. Day. The annual award is made during the Louisiana Wildlife Federation annual convention to the sportsmen's group which attains the highest number of federation members in proportion to the total number of hunting and fishing licenses sold in the parish in which the club exists.
3. L. D. Young, Jr., Director of the Louisiana Wild Life and Fisheries Commission, delivered the keynote speech at the 25th anniversary banquet of the Louisiana Wildlife Federation held in the Lake Room of the Captain Shreve Hotel. Young spoke on challenges facing wildlife and persons engaged in management of wildlife resources. Full text of his address will be found elsewhere in this issue.
4. Speakers appearing at the first general assembly of the 25th annual Louisiana Wildlife Federation annual convention (from left) included Thomas Kimball, Washington, Executive Director of the National Wildlife Federation; Dr. Lyle S. St. Amant, Chief, Oysters, Water Bottoms, and Seafood Division of the Louisiana Wild Life and Fisheries Commission; and Lloyd Voorhees, immediate past-president of the Louisiana Wildlife Federation.
5. Richard K. Yancey, right, Assistant Director of the Louisiana Wild Life and Fisheries Commission, is shown receiving the George Connell Memorial Award for 1963 in recognition of outstanding efforts to bring about sound conservation and wise utilization of the continental waterfowl resources for present and future generations. The Award is presented annually by sportsmen throughout Louisiana to an individual who has made an outstanding contribution in the field of conservation and wildlife management. McFadden Duffy, left, is making the presentation during the annual federation banquet.

25th ANNIVERSARY

6. Mrs. Samuel Levy, Natchitoches, La., is shown receiving a kiss from Frank Adams, outgoing president of the Louisiana Outdoor Writers Association, along with the "Outstanding Conservationist Award" which is presented annually by the writers' association. Mrs. Levy was cited for conservation interests, women's club work, and for her efforts which contributed to naming of the bald cypress as the state tree of Louisiana.
7. Delegates to the annual convention of the Louisiana Wildlife Federation were entertained by crack marksmen of the Red River Bowmen's group during the federation banquet. The archers broke moving balloons and shot arrows through the center of spinning phonograph records as part of their demonstration.
8. Charles Bosch, Executive Director of the Louisiana Wildlife Federation, is shown chatting with Sam Frisby, new federation president, shortly after Frisby's election. Executive officers of the Louisiana Wildlife Federation are maintained in Baton Rouge. The state affiliate of the National Wildlife numbers over 90 sportsmen's clubs and federations in all parts of Louisiana.
9. Busy but interesting spot in the lobby of the Captain Shreve Hotel where the Louisiana Wildlife Federation held its 25th annual convention March 20-22 was the registration desk. Records reveal that this convention was one of the most successful in the federation's quarter-century of service to sportsmen and activities toward sound conservation and utilization of Louisiana's wildlife resources.
10. One of the popular lobby exhibits was a collection of guns shown by members of the Ark-La-Tex Gun Collectors' Club. Here, convention delegates are looking over firearms dating back from the days of the celebrated "Kentucky rifle" to present-day arms.

METHODS OF SPORT FISHING

Grits Gresham

THE FAVORITE method of sport fishing in Louisiana, by a wide margin, is with a cane pole. Unsophisticated though it may be, the technique associated with the bobbing cork is preferred by hundreds of thousands of men, women and children who span the entire range of economic bracket, social status, and angling experience.

Cane pole fishing is popular for three simple reasons. It's fun; it's effective; and it is inexpensive.

But Louisiana fishing only begins with this tactic. Another vast army of anglers choose to use one or more of the following methods: fly fishing, plug casting, spinning, spincasting, trolling, trotlining, jugging, or the use of handlines or set hooks.

Adding still further variety is the fact that most of these methods are adaptable to use from the bank, from a boat, or by wading.

One of the beauties of cane pole fishing is that it can be as simple or as sophisticated as you care to make it. The traditional willow limb, piece of string and a hook, tipped with an earthworm collected there on the river bank, will catch fish. The cost is insignificant but the pleasure afforded can be—and usually is—tremendous.

Then there is the other extreme. A "cane pole" need not be merely a cane pole. It can be of native cane or imported bamboo. It can be naturally finished, varnished, unvarnished, oil treated, drilled, kiln dried, air dried, select, extra-select, or run-of-the-mill. It can be a bream pole, a crappie pole or a buffalo-choupique pole. And it can be almost any combination of these.

The line can be cotton, braided nylon, or monofilament. The float can be a cork, a plastic bobber, or a porcupine quill. There are many kinds of hooks and sinkers.

Bream, crappie, bass, catfish, choupique, buffalo, carp—all are tragets for the freshwater cane pole fisherman. In salt water the cane pole is also used by a few, largely to fish schooling speckled trout with live shrimp.

For bream the bait is most often worms—earthworms, pecan worms, or catalpa worms, grass shrimp, or crickets. For crappie it is usually live minnows. For bass, live minnows or crawfish. For catfish—almost anything. Choupique—beef hearts. Buffalo and carp—mostly dough bait.

Cane pole fishing isn't as simple as one might think. There are many kinds of poles, for instance, and here's a sample of floats and sinkers.

Artificial lures are also used on cane poles for bass, with a skittering or jigging technique typical.

Most of the casting done in Louisiana's freshwater lakes and streams is done with bass in mind, but most of the fly fishing is for bream.

The fly rod is the classic tool of the angler, with the method having been brought to this country from Europe many years ago. In fly fishing the reel is relatively unimportant, serving merely to hold the line. The fly line itself is actually cast, with the lure riding along with it.

Most Louisiana fly fishing is done for bluegill bream with artificial lures, usually with small popping bugs, artificial crickets or spiders, or fly-spinner combinations. The fly rod is, however, a very effective means of fishing worms into a bream bed.

Fly rodding for bass is also popular, mostly with large popping bugs or with streamer-spinner combinations.

Plug casting, often called "bait" casting, is a purely American invention. In it a shorter rod is used—usually four to six feet in length compared to the seven to ten foot flyrods. The plug caster actually casts his lure, which pulls line from the revolving spool of the "casting reel".

Spinning, popular in Europe for years, gained acceptance in Louisiana and in the United States only after World War II. In it the rod is usually longer than a casting rod but shorter than the fly rod, but the spinning *reel* is the big difference. It is a fixed spool reel. In casting the line spills out over the end of the spool.

America took spinning and devised from it spin-casting. The spin-cast reel, in essence, is a spinning reel which has been enclosed, and which is mounted on top of the rod rather than on the bottom. In this position, with a button for "thumbing", it gave anglers the familiarity of the casting rig but with freedom from backlashes.

The spin-cast reel is not as efficient as either the casting reel or the spinning reel, but it has met with staggering acceptance. It is, without doubt, the most important single discovery in recent times in the field of fishing. It has put thousands of new anglers on lakes and streams, and has been responsible for the sale of millions of dollars of fishing tackle of all kinds.

A vast preponderance of the casting, spinning and spin-casting done in Louisiana's fresh waters is for bass, with a wide variety of artificial lures being used. In salt water the object is most often the speckled trout, but frequently is redfish, bluefish, pompano, spadefish, Spanish mackerel, red snapper, dolphin, sheepshead, croaker, or drum.

Casting for crappie—usually spinning or spin-casting—is gaining favor, with small jigs being the best lures.

Trotlines, jugs, and bush lines are used by many catfishermen. All are methods of placing baited hooks before their quarry over a long period of time without actually having a hand on the line.

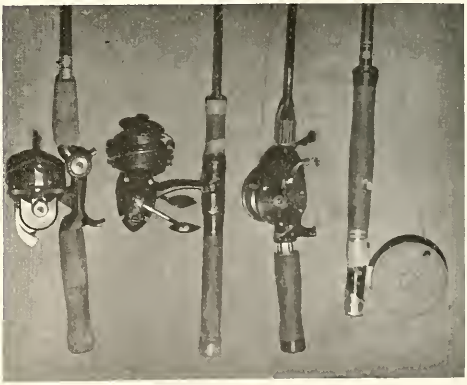
The trotline is a long line which has short drops along it at intervals. In jugging the angler ties short, baited lines to jugs (plastic bottles, cans, or actual jugs), and floats around the lake or downstream with them. The bush line is simply a short, baited line tied to a tree limb.

Trolling is the standard method of fishing saltwater for such species as tarpon, marlin, sailfish, dolphin, mackerel, bonito, bluefish and jack crevalle. Rods and reels for this vary greatly in size along with the size of the fish sought.

Freshwater trolling is usually for bass or barfish, with standard casting, spinning, or spin-casting outfits being used. The great array of excellent outboard motors now available, particularly those with gearshifts, have made trolling more popular and more practical.

Some Louisiana fishing is easy angling on lake or stream . . . but then there is "float" fishing on our small creeks and bayous.

As would be expected in a state which has the diversity of fishing waters and conditions as is found in Louisiana, the angling techniques are equally varied. There should be a method to suit everyone's fancy. Good advice for those who aren't satisfied with any of them, however, is just to wait. By the time this is in print something new will probably have been added. *



To the fly fishing and plug casting methods, two others have been added in Louisiana since the mid-forties—spinning and spin-casting. In the order in which they found favor in this country, from right to left, are: fly, plug casting, spinning, and spin-casting tools.

Director Is Federation Speaker

I CONSIDER it an honor to speak to you upon the occasion of the 25th annual convention of the Louisiana Wildlife Federation. You are to be congratulated on a quarter century of activities and programs aimed at conservation of Louisiana's wildlife resources, and those resources upon which fish and wildlife are so dependent. I commend your efforts to bring about wise utilization of those natural assets.

Only through united efforts of the many clubs and sportsmen's leagues affiliated with the Louisiana Wildlife Federation, working with the Louisiana Wild Life and Fisheries Commission and other organizations interested in conservation and perpetuation of wildlife resources, will it be possible for us to meet the many challenges facing wildlife managers.

I feel that it would be remiss not to call attention to the fact that during the past 25 years many serious challenges to wildlife have been met head-on. The accomplishments have been gratifying and laid the groundwork for conservation as we know it today. Those 25 years have served to herald the growing importance of wildlife management and the role which it is destined to play in the not-too-distant future.

Some of the programs which have been proposed and put into operation in the past two-and-one-half decades were experimental programs. They were successful or abandoned. Broadly speaking, the experimental years are the basis of current wildlife management practices. We have added to our knowledge to the degree that today we have increased most species of game to meet increasing demand for recreation afield. This has been accomplished during the past years in spite of growing inroads of civilization which ironically conflict with wildlife while, at the same time, a growing population makes greater demands upon wildlife and those who manage it for recreational as well as commerical uses.

Recently the Wild Life and Fisheries Commission reorganized its Enforcement Division in order to streamline its activities. The number of Enforcement districts were reduced to eight, with the boundaries of each to conform with the eight existing Fish and Game districts. The organization was adjusted so that each agent in the Division would have an immediate supervisor that he could depend upon for instructions or assistance as needed. An agent II has, or is being planned for each Parish in Louisiana and each of these men will work on enforcement problems in the individual Parishes, as well as supervise the activities of any agent I assigned to their respective Parishes. Agents III are in charge of each of the individual eight districts in the State, and four agents IV were designated to head two districts each and these agents answer directly to the Division Office in New Orleans.

The reorganization we feel will further improve the enforcement of game laws in Louisiana and will greatly add to the incentive of each employee in the Division to do a better job because more opportunity for advancement will exist.

At the same time major pay adjustments for technical employees in biological classifications were placed into effect by the Department of Civil Service upon the requests of the Wild Life and Fisheries Commission. Certainly this adjustment was important and needed in order that we can attract and hold the best technical personnel available. Already this has steemed the flow of biologists from Louisiana and in one instance one biologist has returned to the State after working for another agency for a period of several months.

I do not believe that anyone in this room this evening fails to realize that the population of the United States is expected to double in less than 40 years. At the same time, those seeking outdoor recreation are expected to triple in number.

There are many reasons why the number of persons seeking outdoor recreational outlets will continue to increase faster than the population itself. We all know that shorter work weeks, higher pay scales, easier methods of travel and transportation, and a subtle but certain trend toward participation sports rather than spectator sports—are all part of the package that constitutes a great challenge of those working to provide more outdoor recreation without endangering the source of supply.

L. D. Young, Director of the Louisiana Wild Life and Fisheries Commission, was the principal speaker at the 25th annual convention of the Louisiana Wildlife Federation held in Shreveport on March 21. These are Mr. Young's remarks.

Let me hasten to add that while achievement of this distant ability to fill the recreational needs of an expanded population possibly constitutes the greatest challenge of all, there are other obstacles which are being met as they occur. Each presents a challenge and each is being met with the integrity and knowledge of a closely knit team. I refer to the Louisiana Wild Life and Fisheries Commission and I am pleased to express my thanks to your organization for the cooperation and assistance which the Commission receives from the state wildlife federation.

One of the problems which face us is regulation of migratory waterfowl hunting regulations so that the time-honored sport of duck hunting will not be stifled through over-restriction to the degree that duck hunting will become a thing of the past. The Commission has long realized that closing of the duck season would result in a sharp decrease in hunter interest. This became obvious during the past few years as duck stamp sales tumbled to all-time lows, accompanied by loss in interest in maintaining habitat for waterfowls and wetlands preservation.

Louisiana was the first state to meet this challenge with direct and positive action. It did everything in its power to fan the dying interest of waterfowlers while it left no stone unturned in attempting to bring to light a true picture of the continental duck situation.

Through public hearings in Louisiana and by testimony at national and regional waterfowl conferences, the Commission focused sharp attention on proposals by well-meaning people who sought a closed season on ducks that such action would hurt rather than help the future of waterfowl.

I am pleased to say that in all our efforts we received whole-hearted support from the Louisiana Wildlife Federation and its many affiliated groups.

Progress was made and last year's hunting season was one of the best in the last few years. In round figures, Louisiana wintered approximately 7,000,000 ducks. This amounted to about 2,500,000 more than last year and the greatest number of ducks since records have been kept.

These remarks about the waterfowl controversy serve as a prelude to a statement that without hunter interest, brought about by a better hunting season, there would be total public apathy at this time toward improvement of marshland for wintering ducks. There would also be little concern about the acquisition of waterfowl nesting habitat to stimulate maintaining a huntable number of waterfowl on this continent.

The underlying controversy boiled down to a simple question "What was best for the ducks?"

This question is far from fully settled, and more education must be done. During period when ducks may show some downward cyclic trends because of nesting conditions, there is no need to press the panic button and accelerate any slight downward trend in populations by strangling the interest of present-day hunters in programs that will perpetuate duck populations.

This is but one of the many challenges facing those who manage wildlife and resources upon which wildlife is dependent. I have cited it because it is a prime example of how all of the factors must be considered carefully in determining what are renewable resources important to outdoor recreation, and what are so-called conservation measures which must be taken to prevent any forms of wildlife from total extinction.

I do not believe it is necessary to point out that in addition to recreational values, there are tremendous economic values involved in fish and wildlife. In this instance the reference is not made to commercial fisheries and fur, even though those are valued at millions of dollars in Louisiana alone. Specific reference is made to the millions of dollars presently being spent by sportsmen for tackle and guns, ammunition, boats and motors, clothing, transportation, gasoline, food and lodging, and numerous other items. The recreational value is approximately $20 billion.

Our development program on the coastal State owned waterfowl Refuges continues at a rapid pace. Almost 50,000 acres of marshlands have been improved on the Rockefeller Wildlife Refuge through the installation of levees and water control devices. Almost 40,000 acres of marshlands have been improved on the Marsh Island Wildlife Refuge and State Wildlife Refuges through the construction of over 25 low sill dams by Refuge Division personnel. Last winter over three-fourths of a million ducks and one-fourth of the world's population of blue geese were found on these areas at one time. This is almost seven times greater than the waterfowl population these areas contained prior to development and is another reason why Louisiana is now the most important single area on the Continent as a wintering ground for migratory waterfowl. During January of 1964, this State contained 25% of the continent's wintering duck population and the Commission's habitat improvement programs is partly responsible for this.

A by-product of the development program on Marsh Island has been a greatly increased population of white shrimp on the Refuge. Millions and perhaps billions of post-larval shrimp now move over the low sill dams in the spring of the year and migrate into the marsh ponds where they stay until they reach a good marketable size. With the installation of the low sill dams the marsh ponds no longer go dry during extended periods of low tide in Vermilion Bay and this, apparently has created an ideal nursery condition for the shrimp.

Commercial shrimp trawling is not allowed on the Island but cast netting for sport is and this has been taken advantage of widely by hundreds of sportsmen from the New Iberia area. This form of outdoor recreation on Marsh Island is entirely new and we feel highly desirable. As the shrimp move out of the marshes and over the dams in the fall of the year they migrate into

Vermilion Bay where they are taken by commercial shrimp trawlers. This healthy development for white shrimp was not foreseen in the improvement program on Marsh Island but it is a welcome one.

One highly significant development on the Rockefeller Wildlife Refuge has been the construction of roads rather than canals in the development of mineral leases. Virtually all of this refuge has been leased for mineral purposes by the State Mineral Board and the Wild Life and Fisheries Commission is working hard to insure that these leases as developed in a manner consistent with our wildlife development program. Four of the new leases are being developed by means of roadways and this is another significant victory for wildlife since losses of marsh will be held to an absolute minimum and at the same time roadbeds can be used for water control purposes thereby increasing food supplies for waterfowl and other forms of marsh wildlife.

Another great challenge that will face us for years to come is disguisingly titled pollution, but concerns detergents, pesticides, insecticides, industrial wastes and other water usage. There is every indication that fast action and continuous efforts must be focused upon this mounting problem.

Ironically, the difficulty itself is hinged closely to the growth of the country and its steady increase in pollution. Many of the large agricultural and industrial operations which are producing more income and higher wages for a growing number of people, who are seeking outdoor recreation, are engaged in practices which are capable of doing great damage to the fish and wildlife resources of the country.

A permanent challenge which will face wildlife management people and conservations from these days forward is to seek some solution to the problems of pollution and their consequent detrimental effect on all forms of wildlife.

There is also the threat to human health in today's increasing pollution problems. This cannot be brushed aside lightly. To ignore the seriousness of the combined results of many types of pollution would be disastrous.

The economy of the nation, upon which is linked to the growing need for outdoor recreation, cannot be unbalanced or brought to a halt by certain threats to wildlife. On the other hand, every possible means should be employed to minimize the threat to wildlife.

For some time now we have actively worked in the interest of protecting wildlife habitat in the Atchafalaya Basin. This is one of the most important producers of fish and game in the south and flood control activities which were originally planned back in 1927 threaten to greatly reduce the annual yields of fish, fur-bearing animals, and waterfowl in the Atchafalaya Basin. The tremendous productiveness of the basin, particularly for fishery resources hinges upon the annual overflow of the bottom lands during periods of high water in the spring and early summer months. Flood control activities are gradually reducing both the amount and duration of this overflow to the detriment of fisheries in the area.

This feature has been explained time and again by personnel of the Commission during the course of hundreds of meetings with citizens living in the vicinity of the basin, it has been explained in detail in articles published in our LOUISIANA CONSERVATIONIST magazine, it has been explained on radio and television, and it has also been explained directly to representatives of the U. S. Corps of Engineers during the course of numerous conferences attended by our personnel working in cooperation with representatives of the U. S. Fish and Wildlife Service.

Untiring efforts have been and should be made in the future to save the Atchafalaya Basin for future use as an area of outdoor recreation and commercial fishing. You can rest assured that the Commission will do all that it can in this respect.

As always, when the annual convention of the Louisiana Wildlife Federation overlaps National Wildlife Week, I am prone to consider the theme of this special national week. This year's program is centered around "America Needs Outdoor Recreation—Act Now To Provide For The Future."

I am deeply gratified that Louisiana's Wild Life and Fisheries Commission has in the past few weeks taken a definite step toward acting now to provide for the future. Early this month, the Commission completed act-of-sale of a 50,000-acre tract of land in LaSalle and Catahoula parishes for a public outdoor recreation area, to be known as the Saline Wildlife Management Area.

It will be dedicated to increased development of game populations in central Louisiana, and also serve as a recreational area for fishing, camping, hunting and other recreations pursuits.

This new wildlife management and outdoor recreation area will provide access for Louisianians to some of the finest freshwater sport fishing in the state. In addition to fishing and other recreational uses, the area has a potential carrying capacity of approximately 1,000 deer; 30,000 squirrels; 15,000 rabbits and eventually approximately 100,000 ducks.

This recent action of the Commission in acquiring the tract which consists of 48,679 acres in LaSalle Parish and 1,340 acres in Catahoula Parish marks a great step forward.

I say this in all sincerity to you. We are making every effort to secure lands for wildlife management purposes for the benefit of both present and future generations seeking outdoor recreation.

In the course of my activities as director of the Louisiana Wild Life and Fisheries Commission, I have occasion to move about the state speaking with people and having firsthand reactions to programs initiated by the Commission.

At no other period in the past few years has any single program proved completely acceptable to the people of Louisiana as acquisition of this tract through Russell Sage Foundation funds.

Formal dedication of the tract will take place shortly and work is already begun to enhance and improve the tract for wildlife purposes and associated outdoor recreational pursuits.

One of the most significant victories for wildlife in many years has been the once concerning Catahoula Lake. An extreme controversy over whether or not this lake should be permanently flooded by means of a dam has been going on in Louisiana since 1935. Fish and wildlife interests successfully opposed the impounding of Catahoula Lake at the State level until 1960, then the U. S. Corps of Engineers announced plans for constructing at nine feet navigational channel on the Ouachita River with a lock and dam to be installed below Jonesville that would permanently flood out Catahoula Lake and destroy its value as perhaps the most important single migratory waterfowl area in the Mississippi Flyway.

With this announcement the controversy boiled over again with many individuals favoring the permanent impoundment of the lake and with virtually all of the fish and wildlife interests aligned against it. Finally a compromise was worked out between the U. S. Corps of Engineers and the wildlife interests by which the lock and dam is to be installed below Jonesville, however a new channel is to be constructed from Catahoula Lake to Black River, with a water control structure included in order that water levels can continue to be managed on Catahoula Lake for the benefit of migratory waterfowl, sport and commercial fishing.

This project will be financed by the U. S. Corps of Engineers and operational control of the water control structure will be vested in the U. S. Fish and Wildlife Service. Much of the diversion channel and all of the water control structure is presently scheduled to be located on the Commission's new Saline Wildlife Management Area in the southeastern part of LaSalle Parish. This plan was conceived after almost 1½ years of negotiations and was announced by Congressman Otto Passman on February 29, 1964.

During the course of the Catahoula Lake controversy personnel of the Commission attended hundreds of meetings with civic and sportsmen groups to explain the problem and appeared numerous times on television and radio. We believe that these actions played a great part in winning this victory. The Wild Life and Fisheries Commission left no stone unturned in accomplishing this compromise and we trust that it will be carried out as scheduled.

Our deer trapping and restocking program is a good example of how Commission actions are geared to meet future needs. Through constant and long-range activities, Louisiana today has the greatest statewide deer herd it has ever had. Continued efforts will enlarge existing deer herds.

Many of the delegates to this convention are deer hunters. I would like to mention that deer hunting today is enjoyed on 90 per cent of the deer range in the state. About 10 years ago, deer hunting was confined to less than 20 per cent of the deer range.

In meeting the challenge which deer trapping and restocking presents, Commission personnel evolved a plan about this time last year that allowed them to live-trap 104 deer at a cost of approximately $9 a head. The plan involved use of a helicopter, an airboat, a commission-owned airplane, and commission boats and trucks. In the span of four days, the 104 deer were captured and safely transported to pre-determined release sites where they are under protection and establishing new herds.

At the present time the Louisiana Wild Life and Fisheries Commission has approximately 466,679 acres under management for forest game including deer, squirrels and other species. This past hunting season, there were 36,033 hunter efforts and a total bag of 3,698 deer along with thousands of squirrels.

This compared to 23,149 hunter efforts in 1962 which resulted in 1,352 deer being taken. There are two significant facts worth noting. Hunter use of the game management areas increased by about 13,000 daily efforts in a single year and the kill was nearly triple that of the previous year.

There can be little doubt that demand for areas to hunt in is mounting and at the same time the commission's game management programs are producing more game for deer hunters in Louisiana.

This, I feel, is a good example of how we are meeting the challenges of wildlife management.

During the past 18 months the Wild Life and Fisheries Commission has initiated a new program of constructing public boat launching facilities and this has met with great favor from the sportsmen and boating interests of the State. To date a total of $730,000.00 has been obligated for boat ramps, one-half of which are State funds and the other half being federal funds furnished under the Accelerated Public Works Program.

Thirteen ramps have been completed thus far at a total cost of $157,125.00 and three additional ramps are virtually completed by the contractors, and 42 others are planned for. Wherever possible we are attempting to locate these ramps on publicly owned lands.

Thus far these questions have been limited to only certain parishes in the State that are eligible under the Accelerated Public Works Program as determined by the federal agencies, however, we feel that a tremendous step has been made in the direction of providing public access to publicly owned bodies of water in Louisiana. We trust that this program will be continued until at least one boat ramp is located on each state-owned lake in Louisiana.

I would like to leave you with the thought that

(Continued on page 24)

HYDROGRAPHY

T. B. Ford

THE LOW SHRIMP yields of 1957 and 1961 caused much concern among Louisiana's shrimp industry, sportsmen and the many associated interests. What happened? Why? What can be done about it? These were typical of the many questions raised to the Louisiana Wild Life and Fisheries Commission.

Several major responses were noted including statutory changes by the Legislature, a strong cooperative effort and compromised agreement among the various conservationist groups, and, an increasing and continuing demand for more and more shrimp research, among others. The specific reasons and related factors for that low shrimp production are still unknown. Similar questions and responses, though sometimes less vociferous and of shorter duration, developed when other catastrophic losses or imbalances in nature affecting fisheries or wildlife have occurred.

All too frequently, a good understanding of "Why something happened?" in this field of work is dependent upon continuing studies having been in progress prior to and long enough to know something about the animal and its environment before "It" happens.

In working with short-lived migratory animals, such as shrimp, the various studies designed to provide better management information must be carried out while each crop is available or the opportunity for that year will be lost. Louisiana's coastal bays, lakes, ponds, bayous and marshes serve as the important nursery grounds for the brown and white shrimp among other species of fisheries which are spawned off-shore in the Gulf to which they return after completing part of their life cycle in the more sheltered inside waters. Thus, it is important to study continuously, and concurrently with the particular species, the various environments utilized by the particular animal or groups of animals under study in order to detect environmental changes and interpret the animal responses to such changes.

The common medium is water; therefore, an understanding of its various conditions in the coastal areas and those factors influencing them is essential. For these purposes here, we use the term hydrography as it relates to our water studies program. With this knowledge, we expect to be able to predict in advance productional trends for the industry, determine causes of erratic changes in populations, and develop sound management practices for the commercially important species.

Geologist aboard the laboratory's research vessel "Marine Research" is preparing to take a water sample for analysis.

These studies of marine life in their aquatic environment require an understanding of water and weather conditions on a continuous basis. Some hydrographic studies have been in progress in the Barataria Bay area on a continuous basis since 1957. Gradually, as additional trained personnel, boats and hydrographic equipment became available, some of the big gaps and unknowns in our knowledge of the area began to be filled with very useful data. These data are becoming more important each year for they provide a basis and range for comparing specific conditions of one year with other years.

The collection, plotting and interpretation of considerably more data at more specialized levels is needed and is proposed in order to fill obvious gaps and meet current and future needs as we recognize them in order to satisfactorily fulfill our obligations to the State. Generally, the boat situation is in good shape; however, more trained scientific personnel and specialized recording hydrographic equipment will be needed if this work expands or accelerates any more since our current manpower level is fully utilized if not exceeded.

Currently, basic hydrographic studies under the supervision of a Geologist are centered at and emanate from the Grand Terre Marine Biological Laboratory located across Barataria Pass from Grand Isle. These studies include the taking and treating of continuous recordings of salinity, tides, air and water temperatures, wind speed and direction, barometric pressure and rainfall at the laboratory.

Similar available data from other groups on an area or regional basis which are pertinent to our coastal estuarine area, such as discharge of the Mississippi River, is also analyzed and correlated with data for our specific area.

In the greater Barataria Bay area, sample stations were established and regular weekly runs are made to determine the hydrographic conditions by measuring the salinities and temperatures which indicate changes in the area. Such changes may result from tides, winds, currents, rainfall, high or low discharges from the Mississippi River, etc. Collectively, these various conditions present a complex picture that is in almost constant state of change, day to day, month to month, and year to year.

The determination of salinities at the laboratory is customarily made by a recording saliniometer and by a portable unit in the field from which instantaneous separate readings are made and recorded. Supplementary methods include the use of hydrometers or titration of samples; both of these methods require more time to run.

Salinities in Barataria Bay differ in the south bay from those in the north bay. Our work indicates that the high or low discharge of the Mississippi River influences the salinity of the bay and particularly the south bay. Rainfall within the watershed affects the northern bay while its influence is essentially lost in the lower bay. This appears to be due to the limited watershed area, the amount of rainfall, and the other routes to the sea for the runoff.

A thermograph is being set up and adjusted by the Biological Aide in preparation of making a weekly 200 mile salinity-temperature run in the greater Barataria Bay area.

Superimposed over the freshwater factors are those of the winds and tides which also affect salinities of the bay. Southeasterly winds tend to bring river water into the bay, while southwesterly winds tend to push in the saltier Gulf waters; northerlies tend to push the bay waters out to the Gulf and cause a greater influence of the freshwater from the watershed area on the upper bay.

The influence of saltwater intrusion was observed in the Calcasieu Lake area. It is being observed and studied in the Mississippi River-Gulf Outlet area east of New Orleans and in the Houma Navigation Canal area south of Houma. This effect will probably become a serious problem in these two areas, not only for fish and wildlife in that it decreases the more desirable brackish (low to medium salinity range) water zone, but also for industries not designed to cope with salt water problems including marine growths.

Temperature appears to exert a tremendous influence on animal distribution and activities in the shallow estuarine waters of Louisiana. Fish populations change by species and numbers with many of the fishes apparently migrating to the more constant temperature waters in the Gulf. Although postlarval shrimp come into inside waters during the colder months, generally no growth has been evident until waters warm to about 70°F.

Thermographs record air and water temperatures at the laboratory. It is well known that our bays are relatively shallow. The influence of air temperatures becomes very evident in a comparison of those of the north bay, which are subject to rapid cooling or warming in the shallow marshes, with the south bay, which are subject to the more constant temperature waters of the Gulf. Waters of the north bay are cooler in the

A rain gauge is used to measure rainfall at the laboratory. The three buildings in the background, from right to left, are the laboratory, the dormitory and duplex which are being completed to house personnel.

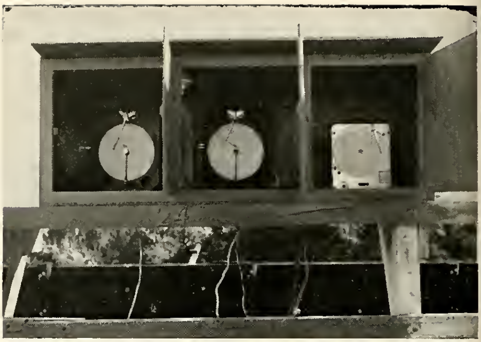
[illegible] nd warmer in the summer, tending to [illegible] air temperatures; conversely, those of the [illegible] are warmer in winter and cooler in summer.

Tidal data has been collected and analyzed at the laboratory since 1958. These tidal movements serve the coastal estuaries by bringing new water inside and flushing or changing the inside waters, and also by bringing in nutrients and planktonic animals such as postlarval shrimp. Currents associated with tidal action transport food to oysters and other fixed animals. In restricted passes the tidal velocity may be twenty to thirty times greater than that found in the secluded parts of the bays. In the bay, prevailing winds and barometric pressure appear to affect the extent of tidal level, though less, as does the relationship between the earth, moon and sun to the tide.

Continuous recordings of winds by direction and speed are made at the laboratory. It is already obvious from what has been stated that winds exert an influence on water conditions and similarly affect planktonic animals. Additionally, wind action affects the turbidity by disturbing the very small particulate matter lying on or near the bottom and causing it to be suspended in the water. Erosion of exposed shore lines and spoil banks also increases thereby putting more materials in suspension. By analyzing wind records and determining speeds and prevailing directions, correlating can then be made with other factors in terms of distribution of animals.

In addition to this basic continuing work, additional short-term or special hydrographic studies are made in this area as well as areas remote from the laboratory. Such studies frequently include the determination of possible effects of navigation channels and pipelines on the marine environment by studying the overall project area before, during and after construction. Changes resulting from such projects may be either beneficial or detrimental to the animals in the affected area depending upon the extent of change and period of adjustment. Rapid, major or large scale changes in the coastal marshes are frequently detrimental since currents are changed, loose spoil materials are available for movement, and salinities may fluctuate more drastically, among other possible factors. Abrupt changes such as these can cause environmental changes which not only affect the marine animals but also the marsh plants.

One important animal, the oyster, is especially vulnerable to excavation projects since it cannot leave its bed. Lack of current cuts off or reduces its food; fresh spoil can be transported by water movement and dropped on the bed thereby suffocating it; and, increased salinities may cause an invasion by a predator, the oyster drill. Conversely, though rarely, such a project sometimes provides a new source of fresh water which depresses or pushes back the influence of the salt water which can be beneficial to the oyster. It would be desirable to provide more controlled freshwater to our estuarine or coastal marshes in sufficient volumes to depress the higher salinities, thereby re-establishing the larger brackish water zones as formerly experienced when natural overflows of the Louisiana rivers entering the Gulf occurred.



This battery of continuous recording instruments is maintained at the marine laboratory for recording air and water temperatures and salinities.

Additional studies being initiated now or in the immediate future are designed to augment that work now in progress. Some instruments will be relatively permanent fixtures while others will serve for monitoring purposes being relocated periodically so that correlations can be made for localized areas with respect to the basic data stations. Tide gauges are being installed now in Caminada and Four Bayous Passes to supplement that of Barataria Pass and more completely understand tidal exchanges in Barataria Bay since it is essentially controlled by these three passes.

More detailed studies of currents and sediments as well as temperature and salinity gradients of these passes is proposed. Temperature and salinity meters will be established in additional coastal areas such as this bay so as to gradually develop more hydrographic knowledge about them. Currently, a six point continuous recording instrument for salinity and temperature at bottom, mid-water and surface levels is on order. It will be located offshore in the vicinity of the shrimp spawning grounds in order to learn more about conditions in that environment so as to study factors relating to shrimp spawning conditions and other off-shore fisheries.

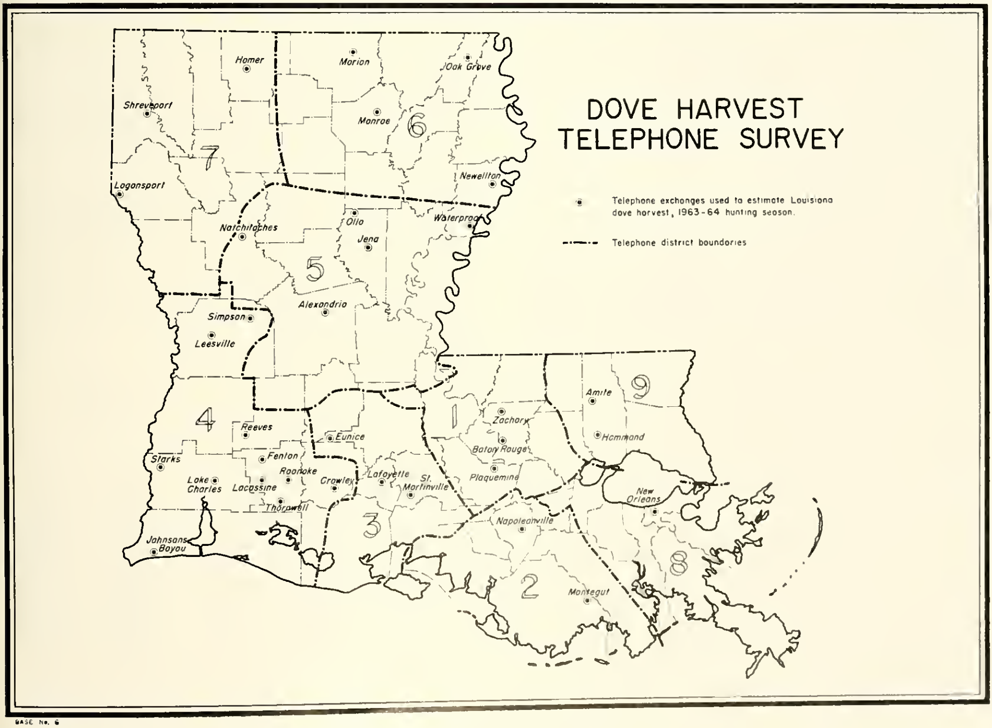
It should be obvious that a widely diversified amount of hydrographic information is required to supplement the biological information being secured concurrently by biologists working on marine species. This is essential if we are to understand the various "life" factors controlling the distribution of these animals in their environment, such as, spawning, development, growth, nutrition, movement, recruitment, and mortality, to name some. Our objective is to permit maximum harvest of the commercially important marine fisheries without jeopardizing future crops. ✠

DOVE HARVEST TELEPHONE SURVEY

A RELIABLE ESTIMATE of total dove kill has long been needed in dove management. With the introduction of a 3-way split dove hunting season in 1962, the need for kill information to evaluate regulation changes has become more critical. The most obvious means of obtaining this harvest information is the interview of dove hunters in the field or a mail survey of hunting license holders. Both approaches presented insurmountable problems. The hunter bag check could not be used because of insufficient personnel to interview in the field the large number of hunters required to estimate kill over a large area, while the survey of hunting license holders was impractical because a recent listing of license purchasers was unavailable.

The problem thus became one of obtaining a listing of persons to sample and obtain information about dove harvest. After exploring numerous listings, telephone directories seemed best suited to our needs. Investigations involving the use of a listing of residential telephones for a survey of dove hunters were begun in 1960 in the Acadia Parish area. Calls made in Eunice and Rayne at the end of each segment of the 1960-61 split dove hunting season indicated that a telephone interview could be used to obtain dove kill information with excellent results. Another phase of this study revealed that over 85% of the hunters contacted while dove hunting in Acadia Parish lived in a household having a telephone. Estimates obtained by a telephone survey will, necessarily, omit doves killed by persons living in households without a telephone. Despite this shortcoming, the telephone survey provides one of the most efficient means presently available for estimating dove kill. This kill estimate, while not complete, is adequate for management purposes.

Armed with the information and experience gained during the 1960 Acadia Parish research study, the Louisiana Wild Life and Fisheries Commission undertook to obtain an estimate of the statewide dove kill during the 1963-64 hunting season. The first step in this operation was to secure a listing of all telephone exchanges and residential subscriber numbers in the state. This information, which contained both Bell and independent exchanges, was obtained from the Southern Bell Telephone and Telegraph Company. It was found that Louisiana has approximately 672,000 residential subscribers divided



An estimated 951,575 doves were bagged in Louisiana during the 1963-64 hunting season by hunters surveyed by telephone.

into nine telephone districts. For this survey a total of 34 exchanges were randomly selected over the state (see map). From these selected exchanges approximately 45,000 subscribers were questioned by telephone about their dove hunting activities. One-third of these households were called at the end of each segment of the hunting season and information concerning the number of dove hunters in the household, the number of hunting trips and kill was recorded. From this large volume of data estimates of hunters, trips and kill for each hunting season segment and telephone district were calculated (see accompanying table). The table represents the hunting activities of persons living in the telephone district and not the hunting trips and kill which occurred in that district. It is probable, however, that most of the hunters living in a district hunted there also.

An estimated total of 951,575 doves was killed in the state by persons residing in a household with a telephone. This kill was approximately evenly divided among the three segments of the season. A large portion of the kill during the first segment occurred in the northern half of the state, while much of the kill during the second and third segments took place in the southern portion of the state. This 3-way split dove season has served to satisfy the demand of hunters in different sections of the state, each group wishing to hunt when birds are most abundant locally, and has provided for an equitable distribution of kill.

Estimates from dove hunters residing in households with a telephone, 1963-64 hunting season. ✠

	Estimated Hunters			*Estimated Trips*			*Estimated Kill*		
*SEGMENT**	*1*	*2*	*3*	*1*	*2*	*3*	*1*	*2*	*3*
DISTRICT									
1	8,634	4,388	3,380	15,956	8,073	12,023	39,478	30,678	61,188
2	1,419	1,161	802	5,723	2,459	2,904	9,446	6,435	4,266
3	5,778	4,221	4,335	13,976	11,866	15,820	31,003	45,527	60,401
4	7,524	6,518	5,120	16,862	18,791	17,889	41,190	75,093	87,155
5	6,550	3,336	3,039	14,049	6,365	10,307	42,641	20,204	28,592
6	9,952	2,368	572	30,373	4,769	1,588	84,604	18,586	10,540
7	8,091	2,694	1,642	15,865	5,821	4,519	53,327	10,255	9,370
8	3,770	2,127	2,641	7,270	5,962	6,398	16,873	26,528	25,384
9	3,178	3,195	2,382	6,353	10,663	6,697	18,964	61,800	32,047
STATEWIDE	54,896	30,008	23,913	126,427	74,769	78,145	337,526	295,106	318,943

*Season segments:
1 September 2-16
2 October 12—November 3
3 December 7—January 7

DIRECTOR SPEAKS

(Continued from Page 19)

the challenges facing wildlife cannot be permanently solved for all time by establishing any fixed set of procedures. Problems crop up at unexpected moments and are often the result of actions of well-meaning people.

We have such a problem at the present time in south Louisiana. The old saying that people always talk about the weather but can't do anything about it also applies to the mosquito problem. For years, all of us talked about them—cussed them roundly—but managed to get along. Modern technology has spawned potent pesticides and created a demand for widespread control measures. Some of the measures endorsed by well-meaning people would prove highly detrimental to seafood and wildlife.

Unwise use of pesticides in the case of mosquitoes alone could cause irreparable damage to the sport and commercial fishing in those areas and to bodies of water necessary to keep Louisiana the leading state in the production of shrimp and oysters.

Any action taken should first be presented to the Louisiana Wild Life and Fisheries Commission for review. Collectively, we do not want to be in the position of curing the disease but killing the patient.

I have touched only lightly on some of the phases of wildlife management and the challenges, both old and new, which are faced. I can assure you that the Commission is facing them head-on as they arise and that it will continue to do so.

Again, my congratulations to this group on its 25th anniversary. They have been fruitful ones and, with much to be done in the years ahead, I am confident that continued progress will be made. ✠

The Bird of the Month

Charles R. Shaw

CAROLINA WREN

Thryothorus ludovicianus

It is rather ironic that this bird should be called the "Carolina Wren" when the specific name *ludovicianus* refers to Louisiana and it was originally described for a specimen from an area which is now included in our state and presumably in the vicinity of New Orleans.

While it is a little smaller than an English Sparrow this is the largest of the wrens normally occurring in Louisiana and it is rather distinctively colored, being a rich red-brown above with a whitish throat which contrasts with the buffy underparts. There is a very conspicuous light colored line extending backward from the bill over the bright brown eye. It displays the characteristic wren action and attitudes as it flits around in thickets, and similar low brushy areas. It is a common year-round resident and may be found throughout the state wherever suitable habitat occurs.

The bird has an amazingly loud song for such a small creature and many novice bird students find it hard to believe that such volume must be attributed to anything as small as a wren, even a relatively large wren. Everyone has his own idea of verbal portrayal of bird songs, but there seems to be a majority opinion that in this case the Carolina Wren often goes "tea-kettle, tea-kettle, tea-kettle, tea" or something on that order.

The Carolina Wren utilizes many types of habitat in both country and town. Almost any piece of woodland or thicket may echo its loud whistling song, either winter or summer, and it may show up in the back yard just as likely as in the back forty.

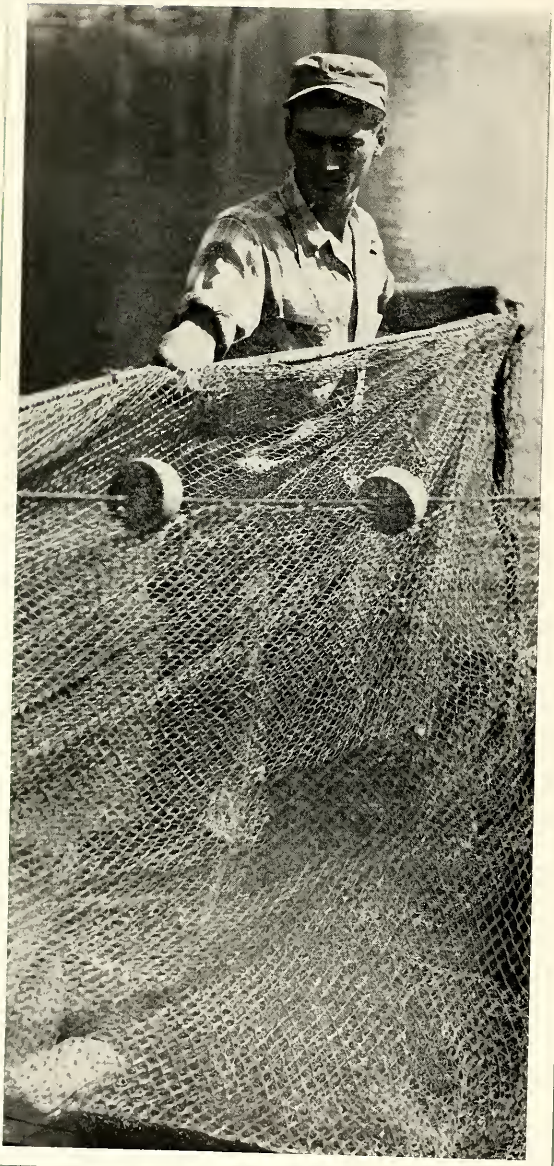
A wren nest may be located in almost any situation from a natural cavity in a tree to an old hat in a garage but usually it is in some type of hollow or protected spot rather than out in the open. On the rare occasions when the nest is placed in a relatively unprotected site it will be a dome-shaped or covered structure with the entrance on the side. As would be expected this bird will readily utilize a well located bird house. The materials of which the nest is constructed can be as varied as the location and may include such items as grass, moss, weed stems, twigs, leaves, etc., and it will be lined with feathers, hair, moss or similar soft material.

The four to six whitish eggs are rather heavily spotted, usually with reddish-brown, although the color may vary toward lilac in some instances.

The site may be in some peculiar location, such as the one only about three feet to one side of the door of a screened-in back porch in Baton Rouge. I am not sure of the fate of all of the brood but I happened to see one youngster make its initial flight which ended in the cavernous mouth of a lemon spotted pointer who engulfed the little bird in mid-air.

This is a very valuable bird from an economic standpoint since its food consists almost entirely of insects such as boll weevils, ants, crickets, cucumber beetles, grasshoppers, flies, etc., although a few weed seeds, poison ivy fruits, etc. may be included.

RETURN REQUESTED
Louisiana Wild Life and Fisheries Commission
400 Royal Street
New Orleans, Louisiana 70130



LOUISIANA COMMERCIAL FISHERIES

Leads Nation

A Louisiana commercial fisherman checks his net in preparation to setting it out. Louisiana leads all other states in the production of commercial fish. Freshwater commercial fishing is an important part of the economy of the State with thousands of people engaged in fishing and associated processing, packaging and marketing of fisheries products.